Department of Statistics & Operation Research-King Saud University

First Semester 1443/1444

STAT 504 – Statistical Methods for research

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**COURSE SYLLABUS**

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| **Week** | **Title** |
| W1 & W2  ( 23/1/ 1443 ) | * Introduction research methodology. * Data collection and analysis mechanisms. |
| W3 & W4 | * Evaluation and analysis of the questioner. * Descriptive statistics methods. |
| W5 & W6 | * Inferential statistics. * Estimation (Point and interval estimation, Type of errors, Concept of P-value) and hypothesis testing (about one and two samples means and proportions including paired data). |
| W7 & W8 | Analysis of correlation (scatter diagrams, Correlation coefficient, Significance test and Spearman rank correlation).Regression analysis (Regression and Model Building, Simple Linear Regression Model, and Multiple Regression Models). |
| **Evaluation I** | |
| W9 & W10 | * Analysis of variance (One-way analysis of variance). |
| W11 & W12 | * Chi-square tests. * Nonparametric methods |
| **Evaluation II** | |
| W13 & W14 | Data Analysis, and Presentation |
| W15 | General reviewing |

**Grading Policy**

**Evaluation I** 20% ---- 20 Marks (H.W. or Case studies)

**Midterm II** 20% -----20 Marks (Mid Term)

**Evaluation III** 20% ---- 20 Marks (Case studies or research)

**Final Exam** 40%---- -40 Marks (Final Exam)

**Homework and exam policy**

Collaboration on homework assignments is encouraged. You may consult outside reference materials, other students, the instructor, or anyone else. There is one restriction: you must write, type, or otherwise record your answers yourself, alone, so that your homework reflects your understanding. No late homework or make-up exams without prior approval; penalties may apply.